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(150) Pine wood nematodes - as a factor of pine decline in Croatia

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In recent years significant decline of pine trees of different species, age, size and position in the forests of Northern Dalmatia (Croatia) has been recorded.

Climatic extremes, especially drought, can be considered the basic adverse factor causing stress and physiological weakening of pine trees and simultaneously improving the conditions for attacks of various types of pests. Analyzing several biotic factors associated with climate extremes shows presents of Pine Processionary Moth, longhorn beetles, bark beetles, needle cast disease caused by fungus but also pine wood nematodes.

So far it is not possible to determine the scope of impact of wood pathogenic nematodes in the chain of pine die back without further studies. 20 samples of *Pinus nigra*, *Pinus pinaster* and *Pinus halepensis* were collected at 6 locations along the coast of Northern Dalmatia. The first results indicate the presents of several groups of nematodes that leave in wood *Aphelenchoides* spp., *Laimaphelenchus* spp., *Ditylenchus* spp., saprofitic nematodes *Cephalobus* spp., *Rhabditis* spp. and *Plectus* spp., nematodes on insects in order *Neotylenchidae* and *Diplogasteride*, as well as species of genus *Bursaphelenchus*: *B. mucronatus*, *B. sexdentati*, *B. eggersi*, *B. minutus* of witch two first ones are considers as pathogenic. In addition, nematode vector *Monochamus galloprovincialis* has been determined which may play an important role in possible occurrence of quarantine species of *Bursaphelenchus xylophilus*.

Keywords: pine decline, climate extremes, bark beetles, pine wood nematodes, *Bursaphelenchus* spp.

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